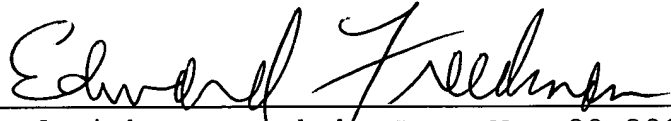


**REMARKS**

By this Preliminary Amendment, the amendments submitted to the European Patent Office are incorporated into the US application. No new matter has been introduced. Entry of this amendment is respectfully requested.

Respectfully submitted,

Roland Voigt et al



Frederick J. Dorchak, Reg. No. 29,298

William C. Collard, Reg. No. 38,411

Edward R. Freedman, Reg. No. 26,048

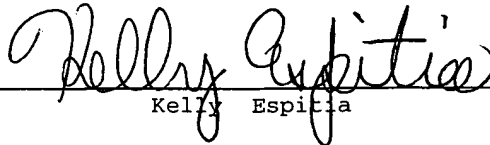
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Kelly Espitia



[13463/61]

[originally 12493/61]

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Inventors : Howard STERN et al.  
Serial No. : 10/387,940  
Filed : March 12, 2003  
For : SYSTEM FOR IMAGING AN OBJECT OR PATTERN  
Examiner : Thanh X. LUU  
Art Unit : 2878  
Confirmation No. : 1860

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Date: October 20, 2006

Signature: Loretta E. Charles  
Loretta E. Charles

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE**

S I R:

This paper is responsive to the Office Action of July 20, 2006.

**Remarks** begin on page 2 of this paper.

## **REMARKS**

### **I. Introduction**

Claims 25 to 27, 34, 35, and 38 to 41 are pending in the present application. It is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

The Examiner will note that Applicants have changed the attorney docket number for this application from "12493/61" to --13463/61--. Applicants will use the new attorney docket number 13463/61 on all future correspondence with the Office and request that the Office change its records to reflect the new attorney docket number.

### **II. Rejection of Claims 25 to 27, 34, 35, and 38 to 41 Under 35 U.S.C. § 103(a)**

Claims 25 to 27, 34, 35, and 38 to 41 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 4,092,068 ("Lucas et al.") and U.S. Patent No. 5,346,049 ("Nakajima et al."). Applicants respectfully submit that the combination of Lucas et al. and Nakajima et al. does not render obvious the present claims for the following reasons.

Lucas et al. purportedly relate to a surface sensor. Nakajima et al. purportedly relate to a coin discriminator using a plurality of optical fiber groups. Applicants respectfully submit that the combination of Lucas et al. and Nakajima et al. does not disclose, or even suggest, a system for imaging an object including a light source configured to illuminate multiple portions of the object one portion at a time in combination with light guides that **vary in elevation with respect to the object**, as required by claims 25 and 27.

The Office Action refers to col. 6, lines 1 to 10, and states that the detectors/guides of Lucas et al. are positioned at different angles to obtain topography information. However, as specifically pointed out at col. 6, line 6, Lucas et al. is merely referring to an angle **between** the detectors. Changing the angle between the detectors, i.e., equally changing the angle between each detector and an imaginary vertical line passing through the object being imaged, has an equal effect on each detector and in no way implies that the detectors are at different elevations with respect to the object being imaged. Further, as detailed below, interpreting the referenced section of Lucas et al. as stating that the detectors are at different elevations with respect to the object being imaged is inconsistent with the manner in which the imaging system of Lucas et al. is stated to function.

In effect recognizing the above-detailed deficiency of Lucas et al., the Office Action relies upon Nakajima et al. for its alleged disclosure of light guides at varying elevation with respect to an object being imaged. However, the modification of Lucas et al. as proposed in the Office Action would change the principle of operation of the device and method described by Lucas et al. and/or render the device and method described by Lucas et al. unsatisfactory for its intended purpose. Under these circumstances there is no suggestion or motivation to make the proposed modification. See, for example, In re Ratti, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959) (a combination of references is insufficient to render claims prima facie obvious if the proposed modification or combination would change the principle of operation of the prior art being modified); In re Gordon, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984) (there is no suggestion or motivation to make a proposed modification if the proposed modification would render the prior art being modified unsatisfactory for its intended purpose).

As shown in Figures 6a-6d and detailed in col. 4, lines 16 to 35 of Lucas et al., two detectors arranged at the same height over an object to be imaged collect light reflecting off the object and image the object by comparing the intensity of light collected by each detector. As best seen in Figure 6a-6d, an uneven object surface or topography causes different amounts of light to reflect on to each detector, which fact is used to determine a direction or inclination of the surface feature causing the uneven distribution of light. Changing the relative heights of the detectors, as suggested by the Office Action, would render unworkable the imaging system of Lucas et al. because it would skew the system readings. If the detectors of Lucas et al. were at different heights the system could not validly attribute differences in light intensity detection between the sensors solely to an orientation or inclination of particular feature of the object being imaged as the closer detector would consistently detect more light given its positioning. In light of the above, the combination of Lucas et al. and Nakajima et al. does not render unpatentable claims 25 and 27.

Nakajima et al. uses multiple detectors to in effect take a snapshot of a stationary coin. Lucas et al. do not take a snapshot of the object being imaged, they build a model of the surface being imaged indirectly by scanning and comparing the light intensity detected by two detectors on opposite sides of surface features on the object being imaged. Given the different imaging models, one skilled in art would simply not have looked to the teachings of Nakajima et al. for information as to how to modify, expand, or in any way improve upon the detector arrangement of Lucas et al. Further, given the very different imaging approaches used by Lucas et al. and Nakajima et al., it is in no way surprising that

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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Commissioner for Patents  
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Date: October 20, 2006

Signature: Loretta E. Charles  
Loretta E. Charles

**TRANSMITTAL**

SIR:

In response to the Office Action of July 20, 2006, transmitted herewith is a Response for filing in the above-identified application.

While no fees are believed to be due, the Commissioner is authorized, as appropriate and/or necessary, to charge any fees or credit any overpayment to Kenyon & Kenyon LLP Deposit Account No. 11-0600. A duplicate copy of this transmittal letter is enclosed for that purpose.

Respectfully Submitted,

KENYON & KENYON LLP

Dated: October 20, 2006

By: Abraham P. Ronai  
Abraham P. Ronai (Reg. No. 41,275)

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**CUSTOMER NO. 26646**

the Office Action's attempt to modify the system of Lucas et al. so as to incorporate an aspect of the light guide arrangement of Nakajima et al. renders the system of Lucas et al. unworkable.

Therefore, for the foregoing reasons, withdrawal of the present rejection and allowance of claims 25 and 27 are respectfully requested.

Claims 34, 38, and 39 depend from claim 25 and therefore include all of the limitations of claim 25. Claims 35, 40, and 41 depend from claim 27 and therefore include all of the limitations of claim 27. As more fully set forth above, it is respectfully submitted that the combination of Lucas et al. and Nakajima et al. do not render obvious independent claims 25 and 27. Therefore, Applicants respectfully submit that the combination of Lucas et al. and Nakajima et al. do not render unpatentable claims 34, 38, and 39 and claims 35, 40, and 41 for at least the reasons submitted above in support of the patentability of claims 25 and 27, respectively. In re Fine, 837 F.2d 1071 (Fed. Cir. 1988) (any dependent claim that depends from a non-obvious independent claim is non-obvious).

### **III. Conclusion**

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

KENYON & KENYON LLP

Dated: *October 20, 2006* By:



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